

**State of California
California Regional Water Quality Control Board, Los Angeles Region**

**TENTATIVE RESOLUTION NO. 2002-XX
October 24, 2002**

Amendment to the Water Quality Control Plan (Basin Plan) for the Los Angeles Region to Incorporate a Total Maximum Daily Load for Chloride in the Upper Santa Clara River

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region, finds that:

1. The federal Clean Water Act (CWA) requires the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) to develop water quality standards which include beneficial use designations and criteria to protect beneficial uses for each water body found within its region.
2. The Regional Board carries out its CWA responsibilities through California's Porter-Cologne Water Quality Control Act and establishes water quality objectives designed to protect beneficial uses contained in the Water Quality Control Plan for the Los Angeles Region (Basin Plan).
3. Section 303(d) of the CWA requires states to identify and to prepare a list of water bodies that do not meet water quality standards and then to establish load and waste load allocations, or a total maximum daily load (TMDL), for each water body that will ensure attainment of water quality standards and then to incorporate those allocations into their water quality control plans.
4. The Upper Santa Clara River was listed on California's 1998 section 303(d) list, due to impairment for chloride, which is present at levels that exceed the water quality standard and do not protect the most sensitive beneficial uses of the water body.
5. A consent decree between the U.S. Environmental Protection Agency (USEPA), Heal the Bay, Inc. and BayKeeper, Inc. was approved on March 22, 1999. This court order directs the USEPA to complete TMDLs for all the Los Angeles Region's impaired waters within 13 years.
6. The elements of a TMDL are described in 40 CFR 130.2 and 130.7 and section 303(d) of the CWA, as well as in USEPA guidance documents (e.g., USEPA, 1991). A TMDL is defined as "the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background" (40 CFR 130.2). Regulations further stipulate that TMDLs must be set at "levels necessary to attain and maintain the applicable narrative and numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality" (40 CFR 130.7(c)(1)). The provisions in 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters.
7. Upon establishment of TMDLs by the State or USEPA, the State is required to incorporate the TMDLs along with appropriate implementation measures into the State Water Quality

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Management Plan (40 CFR 130.6(c)(1), 130.7). The Basin Plan and applicable statewide plans serve as the State Water Quality Management Plans governing the watersheds under the jurisdiction of the Regional Board.

8. The Santa Clara River is located in Los Angeles and Ventura Counties, California. The proposed TMDL addresses documented chloride water quality impairments in ~~two of the Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA303(d) list Reach 8)~~ reaches of the Santa Clara River that are located upstream of the United States Geological Survey Blue Cut Gauging Station near the Los Angeles/Ventura County line.
9. The Regional Board's goal in establishing the above-mentioned TMDL is to restore and maintain the agricultural supply (AGR) and groundwater recharge (GWR) beneficial uses of the Santa Clara River as established in the Basin Plan. Literature studies have ~~shown~~ documented a ~~the~~ relationship between agricultural supply water quality and chloride concentration. At a public hearing on December 7, 2000, the Regional Board considered modifying the water quality objective for chloride of 100 mg/L ~~above~~ at the Blue Cut Gauging Station in Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA303(d) list Reach 8). The Regional Board ~~extended the interim chloride limits for discharges to the Santa Clara River (Resolution No. 00-21) and~~ maintained the water quality objective of 100 mg/L (measured instantaneously), ~~finding it necessary to support the agricultural supply beneficial use.~~
10. Interested persons and the public have had reasonable opportunity to participate in review of the amendment to the Basin Plan. Efforts to solicit public review and comment include twelve public workshops held between January 1999 and September 2002; public notification 45 days preceding the Board hearing; and responses from the Regional Board staff to oral and written comments received from the public. Additionally, Regional Board staff distributed a preliminary draft of the Staff Report for the Upper Santa Clara River Chloride TMDL on July 19, 2002 to interested parties. A public meeting was held in Santa Clarita on August 1, 2002, where staff received comments on the preliminary draft and answered questions for interested parties and the public. A final draft of the Upper Santa Clara River Chloride TMDL along with a Notice of Hearing and Notice of Filing were published and circulated 45 days preceding Board action; Regional Board staff responded to oral and written comments received from the public; and the Regional Board held a public hearing on October 24, 2002 to consider adoption of the Upper Santa Clara River Chloride TMDL.
11. The amendment is consistent with the State Antidegradation Policy (State Board Resolution No. 68-16), in that the changes to water quality objectives (i) consider maximum benefits to the people of the state, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies. Likewise, the amendment is consistent with the federal Antidegradation Policy (40 CFR 131.12).
12. The basin planning process has been certified as functionally equivalent to the California Environmental Quality Act requirements for preparing environmental documents (Public Resources Code, Section 21000 et seq.) and as such, the required environmental documentation and CEQA environmental checklist have been prepared.
13. The proposed amendment results in no potential for adverse effect (de minimis finding), either individually or cumulatively, on wildlife.

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14. The regulatory action meets the “Necessity” standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b).
15. The Basin Plan amendment incorporating a TMDL for chloride at the Upper Santa Clara River must be submitted for review and approval by the State Water Resources Control Board (State Board), the State Office of Administrative Law (OAL), and the USEPA. The Basin Plan amendment will become effective upon approval by OAL and USEPA. A Notice of Decision will be filed.

THEREFORE, be it resolved that pursuant to Section 13240 and 13242 of the Water Code, the Regional Board hereby amends the Basin Plan as follows:

1. Pursuant to sections 13240 and 13242 of the California Water Code, the Regional Board, after considering the entire record, including oral testimony at the hearing, hereby adopts the amendment to Chapter 7 the Water Quality Control Plan for the Los Angeles Region to incorporate the elements of the Upper Santa Clara River Chloride TMDL as set forth in Attachment A hereto.
2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Board in accordance with the requirements of section 13245 of the California Water Code.
3. The Regional Board requests that the State Board approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward it to OAL and the USEPA.
4. If during its approval process the State Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Board of any such changes.
5. The Executive Officer is authorized to sign a Certificate of Fee Exemption.

I, Dennis A. Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region, on October 24, 2002.

Dennis A. Dickerson
Executive Officer

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Attachment A to Resolution No. 02-XX

Proposed Amendment to the Water Quality Control Plan – Los Angeles Region

To Incorporate the

Upper Santa Clara River Chloride TMDL

Proposed for adoption by the California Regional Water Quality Control Board, Los Angeles Region on October 24, 2002.

Amendments

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Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

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7-6 Upper Santa Clara River Chloride TMDL

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Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries

Upper Santa Clara River TMDL

This TMDL was adopted by:

The Regional Water Quality Control Board on [Insert Date].

This TMDL was approved by:

The State Water Resources Control Board on [Insert Date].

The Office of Administrative Law on [Insert Date].

The U.S. Environmental Protection Agency on [Insert Date].

The following table summarizes the key elements of this TMDL.

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Element	<p>Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements</p> <p>Santa Clara River Chloride</p>
Problem Statement	<p>Elevated chloride concentrations are causing impairments of the water quality <u>objective in Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA 303(d) list Reach 8) of the Santa Santa Clara River standard.</u> This objective standard was set to protect all beneficial uses; agricultural beneficial uses have been determined to be most sensitive and are not currently attained <u>at the downstream end of Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA 303(d) list Reach 8) in the Upper Santa Clara River.</u> Irrigation of salt sensitive crops such as avocados and strawberries with water containing elevated levels of chloride results in reduced crop yields. Chloride levels in groundwater are also rising.</p>
Numeric Target <i>(Interpretation of the numeric water quality objective, used to calculate the load allocations)</i>	<p>This TMDL has a numeric target, expressed as a chloride concentration, <u>required to attain based on the water quality objective and required to protect agricultural supply beneficial use.</u> These objectives are set forth in Chapter 3 of the Basin Plan, <u>as amended by the Regional Board on December 7, 2001.</u></p> <p>The numeric target for this TMDL pertains to Reaches 5 and 6 of the Santa Clara River and is based on achieving the existing water quality objective of 100 mg/L, <u>measured instantaneously,</u> throughout the impaired reaches. The numeric target for the effluent limit considers the additional flow from natural sources that enters the River between the WRP discharge points and the end of each reach. A subsequent Basin Plan amendment will be considered by the Regional Board necessary either (1) to adjust the <u>chloride objectives based on additional technical studies about the chloride levels, including levels that are protective of salt sensitive crops, chloride source identification, and the magnitude of assimilative capacity in the upper reaches of the Santa Clara River.</u> s that are protective of salt sensitive crops or (2) to ensure full compliance with instantaneous maximums provided that CSDLAC chooses to submit timely and complete studies in accordance with tasks 2-6 of Table 7.6.1.</p>
Source Analysis	<p>The principal source of chloride into Reaches 5 and 6 of the Santa Clara River is discharges from the Saugus <u>Water Reclamation Plant (WRP)</u> and Valencia WRPs, which are estimated to contribute 70% of the chloride load in Reaches 5 and 6. Another key source is the discharge of groundwater in Reaches 5 and 6.</p>

Element	<p>Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements</p> <p>Santa Clara River Chloride</p>
	<p>Dry weather runoff also potentially contributes to the chloride load.</p>
Linkage Analysis	<p>Linkage between chloride sources and the in-stream water quality was established through a statistical analysis of the WRP effluent and water quality data at Blue Cut and Highway 99. The analysis shows that additional assimilative capacity is usually added to Reaches 5 and 6 from groundwater discharge, <u>but the magnitude of the assimilative capacity is not well quantified.</u> Consequently, the Implementation Plan includes a hydrological study (Surface Water/Groundwater Interaction) of the upper reaches of the Santa Clara River.</p>
Waste Load Allocations(for point sources)	<p>The numeric target is based on the water quality objective for <u>chloride.</u> was established using a statistical analysis of the entire historical record. The proposed waste load allocations (WLAs) are 100 mg/L for Valencia WRP and 100 mg/L for Saugus WRP. The waste load allocations are <u>numeric target is expressed</u> expressed as a concentration limit derived from the existing WQO, <u>thereby accommodating future growth.</u> allowing permitting of additional loads. However, Other NPDES discharges contribute a minor chloride load, and all discharge well below the numeric target established in this TMDL. The waste load allocation for these point sources is 100 mg/L. he success of the TMDL requires additional studies of the impact of any additional loads.</p>
Load Allocation (for non point sources)	<p><u>The source analysis indicates nonpoint sources are not a major source of chloride. The load allocations for these nonpoint sources is 100 mg/L.</u></p>
Implementation	<p>Refer to Table 7-6.2</p> <p><u>The implementation plan proposes that during the period of TMDL implementation, compliance for the WRP effluent will be evaluated in accordance with interim limits based on 2000 - 2001 performance (i.e. effluent chloride concentration at the Valenica and Saugus WRPs). Using the USEPA protocol described in Table 5-1 of the Technical Support Document for Water Quality-based Toxics Control (USEPA, 1991), the average monthly interim limits are 200 mg/L and 187 mg/L, and the maximum daily limits are 218 mg/L and 196mg/L for the Saugus and Valencia WRPs, respectively.</u></p>
Margin of Safety	<p>An implicit margin of safety is incorporated through conservative model assumptions and statistical analysis. In addition, an explicit margin of safety is incorporated by reserving 10% of the load,</p>

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Element	<p>Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements</p> <p>Santa Clara River Chloride</p>
	<p>calculated on a concentration basis from allocations to WRP effluent sources.</p>
<p><i>Seasonal Variations and Critical Conditions</i></p>	<p>Three critical conditions are identified for this TMDL. The driest six months of the year is the first critical condition for chloride: because less surface flow is available to dilute effluent discharge, pumping rates for agricultural purposes are higher, groundwater discharge is less, poorer quality groundwater may be drawn into the aquifer and evapotranspiration effects are greater in warm weather. During drought, the second critical condition, reduced surface flow and increased groundwater extraction continues through several seasons with greater impact on groundwater resource and discharge. <u>The third critical condition is based on the recent instream chloride concentration increases such as those that occurred in 1999, a year of average flow, when 9 of 12 monthly averages exceeded the objective. Data from all three critical conditions were used in the statistical model described.</u> <u>Hydrological modeling will be completed to evaluate whether additional loading will impact the WQO or beneficial uses during non-critical conditions.</u></p>

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<p>Table 7-6.2. Upper Santa Clara River Chloride TMDL: Implementation</p> <p>Implementation Tasks</p>	<p>Completion Date</p>
<p>1. Evaluation of Alternative Water Supplies for Agricultural Beneficial Uses: CSDLA will quantify water needs, identify alternative water supplies, evaluate necessary facilities, and report results.</p> <p>a) <u>Should the monthly average in-river concentration at Blue Cut, the reach boundary, exceed the water quality objective of 100 mg/L, measured as a rolling twelve month average, for three months of any 12 months, the discharger will be responsible for providing an alternative water supply that meets the irrigation requirements of Camulos Ranch and/or other impacted agricultural diversions which may be identified during Task III of the implementation plan until such time as the in-river values do not exceed the water quality objective.</u></p> <p>2. b) <u>Should the instream concentration be exceed 230 mg/l more than two times in a three year period, the discharger shall be required to submit a work plan within ninety days for an accelerated schedule to reduce chloride discharges.</u></p>	<p><u>Effective Date of TMDL</u></p>
<p>2. <u>4.—Groundwater/Surface Water Interaction Model: County Sanitation Districts of Los Angeles (CSDLAC) will solicit proposals, collect data, develop model in cooperation with the Regional Board, obtain peer review, and report results. The impact of source waters and reclaimed water plans on the WQO and beneficial uses will also be assessed and specific recommendations for management developed for Regional Board consideration.</u></p> <p>3. <u>2.—Chloride Source Identification/Reduction, Pollution Prevention and Public Outreach Plan: CSDLAC will quantify sources, execute pilot outreach programs, assess pilots, develop and implement source reduction/pollution prevention and outreach program, and report results.</u></p> <p>3. <u>Should the monthly average in-river concentration at Blue Cut, the reach boundary, exceed the water quality objective of 100 mg/L, measured as a rolling twelve month average, for three months of any 12 months, the discharger will be responsible for providing an alternative water supply that meets the irrigation requirements of Camulos Ranch and/or other impacted agricultural diversions which may be identified during Task III of the implementation plan until such time as the in-river values do not exceed the water quality objective.</u></p> <p>4. <u>4.—Evaluation of Appropriate Chloride Threshold for the Protection of Sensitive Agricultural Supply Use and Endangered Species Protection: CSDLAC will convene a technical advisory committee in cooperation with the Regional Board, review literature, develop</u></p>	<p>2 years after Effective Date of TMDL</p>

<p>Table 7-6.2. Upper Santa Clara River Chloride TMDL: Implementation</p> <p>Implementation Tasks</p>	<p>Completion Date</p>
<p>methodology for assessment, execute methodology, and report results.</p>	
<p>5. Develop Site Specific Objectives (SSO) for Chloride for Sensitive Agriculture (if necessary): <u>CSDLAC</u> will solicit proposals, develop technical analyses upon which the Regional Board may base a Basin Plan amendment.</p> <p>6. Develop Anti-Degradation Analysis for Revision of Chloride Objective by SSO (if necessary): <u>CSDLAC</u> will solicit proposals, develop draft anti-degradation analysis for Regional Board consideration.</p>	<p>3 years after Effective Date of TMDL</p>
<p>7. Preparation and <u>Consideration</u> Adoption of a Basin Plan Amendment (BPA) <u>to revise the chloride objective by the Regional Board for Chloride Objective</u> (if necessary to adjust the objectives based on analyses conducted pursuant to Implementation Task 4).</p>	<p>3.5 years after Effective Date of TMDL</p>
<p>8. <u>-Reconsideration</u> Modification of the Chloride TMDL for the Upper Santa Clara River <u>by the Regional Board</u> (if necessary to implement the revised objectives from Implementation Task 7, or if necessary, to ensure full compliance with instantaneous maximums).</p>	<p>4 years after Effective Date of TMDL</p>
<p>9. Analysis of Feasible Compliance Measures to Meet Load Allocations from Revised <u>Revised</u> TMDL, <u>if necessary</u>. (if necessary): <u>CSDLAC</u> will assess and report <u>on feasible implementation actions to meet the chloride objective in place after Task 7.</u></p>	<p>5 years after Effective Date of TMDL</p>
<p>10. Planning, Design, Construction of Advanced Treatment Facilities (if necessary): <u>CSDLAC</u> will prepare CEQA documents, obtain permits, acquire easements, design system, and construct.</p>	<p>13 years after Effective Date of TMDL</p>
<p>11. Water Quality Objective for chloride in the Upper Santa Clara River shall be achieved.</p>	<p>14 years after Effective Date of TMDL</p>

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